NATIONAL CONVERGENCE TECHNOLOGY CENTER

Five IT Trends – Spring 2022

The list below summarizes three IT trends discussed by the National CTC's BILT (Business and Industry Leadership Team) at the February 2022 web meeting. The purpose of these "trend talks" is to keep faculty – and their students – informed on the ever-evolving IT landscape.

1. Quantum computing is coming, but it's not here yet. Cybersecurity professionals worry that quantum computing can "look in between" the transactions because of its faster processing power, which means standard cyber safeguards won't work. Right now, the technology has a capacity of 50 to 100 qubits; to "open up" blockchain or encryptions, it will take 13 million qubits. That capacity may not be possible until at least 2030.
Learn more: https://azure.microsoft.com/en-us/overview/what-is-a-qubit/#introduction

2. Remote work is here to stay. We are not going back. It's now a "hybrid world." It takes more effort to communicate and collaborate remotely, whether it's with your team or with your customer. Classroom work should reflect this new reality so students can develop these skills – maybe group work or capstone projects are delivered online.
Learn more: https://medium.com/himalayas-blog/18-essential-remote-work-skills-for-remote-workers-80979ccdd305

3. More and more companies are adopting a DevOps culture. The network administrator of tomorrow won't come in and just program and manage the network. Instead, that person will have to automate and integrate tasks and functions using things like APIs. Companies may not be looking for entry-level programmers to design APIs, but they will need technicians who know how to use APIs.
Learn more: https://www.pmi.org/disciplined-agile/process/disciplined-devops/defining-devops

4. Hands-on lab time and real-life scenarios are essential for students. Emulators cannot replace the experience of going to a lab and touching the physical hardware. Employers in a job interview will not ask about packet tracer and hypotheticals. They're going to ask the job applicant the basics, then see how far they can dig. Employers will want to "get into the weeds" and you can only learn so much just reading a book. One employer noted that too many applicants have clearly spent too much time solely in packet tracer. Another employer often tests an applicant by leaving an Ethernet cable only halfway plugged in, an easy problem to solve but one that almost no one correctly identifies.

5. Even with a push to cloud computing, physical network skills remain in demand. Students still need a fundamental understanding of hardware. Traditional certs like A+, Network+, and CCNA have value even as cloud-focused skills related to AWS and Azure are growing in demand.
Learn more: https://www.comptia.org/blog/top-it-skills-in-demand

For a deeper dive into these topics and others, download the February 2022 BILT meeting minutes, which can be accessed for free here: https://nationalctc.nationalctcwiki.org/bilt.